

## What can I do?

- Set your own personal goal for your HbA1c in discussion with us - your diabetes team. This goal will be different for different people at different times of their lives.
- Attend your clinic appointments
- Contact a member of the diabetes team for support and advice
- Accept the support offered to you from your diabetes team.
- You will be seen by a specialist nurse every four weeks until this is closer to target.



### Contact details

The James Cook University Hospital.  
Telephone: (01642) 854660

The Friarage Hospital Northallerton.  
Telephone: (01609) 763718

We hope you have found this leaflet informative.

If you have any further questions or would like to discuss your HbA1c please contact us.

Best wishes  
Your diabetes team

## Patient Experience

South Tees Hospitals NHS Foundation Trust would like your feedback. If you wish to share your experience about your care and treatment or on behalf of a patient, please contact The Patient Experience Department who will advise you on how best to do this.

This service is based at The James Cook University Hospital but also covers the Friarage Hospital In Northallerton, our community hospitals and community health services.

To ensure we meet your communication needs please inform the Patient Experience Department of any special requirements, i.e. Braille/ Large Print.

T: 01642 835964

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## The HbA1c Test

Information for children and young people with diabetes



## What is the HbA1c test?

HbA1c is the name of the test used to assess your blood glucose control over the last two to three months.

## How will the blood be collected?

When you attend clinic we will collect a small amount of blood by pricking your finger. You can use your own pen to do this. The blood can also be collected from your vein. The sample is tested in clinic. It takes 6 minutes. You will receive your HbA1c value while you wait.

If there are any problems with the machine the sample will be sent to the laboratory and we will write to you with the result.

## Why is it called a HbA1c?

Hb stands for haemoglobin. This is the part of our blood which carries oxygen from the lungs to all parts of the

body. HbA takes its name from the red colouring in the haemoglobin. HbA1c consists of HbA and glucose which are combined together in the red blood cells.

## What happens?

A red blood cell lives for about 120 days. During the red blood cell's life-span, glucose attaches to its haemoglobin. HbA1c is the haemoglobin in the red blood cells that has

glucose attached to it. If the blood glucose levels are high the HbA1c will be high. If the blood glucose levels are high the HbA1c will be high. If the blood glucose levels are low, the HbA1c will be low.

## Why do this test?

If your HbA1c is monitored at regular intervals, at least every three months, the results will provide a good summary of how your blood glucose control has been throughout the year. This information can be used to give you valuable advice on adjusting your insulin and/or your lifestyle. There is convincing scientific evidence and studies that good diabetes control can postpone and prevent complications.

## What do the results mean?

HbA1c results are expressed as mmol/mol

	mmol/mol
Normal value - person without diabetes	Below 42
Risk of hypoglycaemia (in diabetes)	Below 42
<b>Ideal diabetes control</b>	<b>42-53</b>
Acceptable diabetes control	53-58
Need to discuss your current management	59-75
High - increased risk of complications	Above 75

Important note: In children below the age of two years the brain is still developing and repeated severe hypoglycaemia and fits can cause damage to the brain. In pre-school children avoiding severe hypoglycaemia should be the highest priority and parents may have to accept a slightly higher HbA1c. It is more difficult to obtain a good HbA1c value during puberty, as the production of growth hormone will raise your blood glucose levels.

You can get a good HbA1c reading with a combination of low blood glucose values and some high readings. However, it is still very important to test your blood glucose daily and adjust your insulin accordingly, as you are much more likely to feel better when your blood glucose level is relatively even.

## Is the HbA1c test just used to check up on me?

No, your HbA1c is most valuable to you. You can use it to help you make decisions about your diabetes management and lifestyle. These decisions may be that you need to try and tighten your blood glucose control or that you can afford to relax your control a little and allow yourself more flexibility.

We look forward to seeing you at clinic and we want this to be a positive experience for you too. We do not want you to think you are getting told off, please tell us if you feel this is the case. However, you must understand that

it is our job to encourage and support you in achieving good diabetes control.

## What if my HbA1c is very high?

You may feel tired, angry or unwell. You may not even realise you are feeling like this, but once you begin to improve your control you will feel much better and have a lot more energy to do the things you enjoy.

If your HbA1c value is very high - (above 108mmol/mol) and you are able to adjust your insulin or lifestyle to achieve blood glucose results consistently between 5-10 mmol/l your HbA1c will reduce by approximately 10mmol/mol every tenth day.

## Can my HbA1c be too low?

If you have a very low HbA1c your average blood glucose is low and you may have a high risk of severe hypoglycaemia without any warning signs. If you have a low HbA1c and problems with severe hypoglycaemia or hypoglycaemia unawareness, it is a good idea to aim for a slightly higher HbA1c.